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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,607	03/09/2001	Alex Davidkhanian	AD-9	8160

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EXAMINER

KASTLER, SCOTT R

ART UNIT PAPER NUMBER

1742

DATE MAILED: 04/24/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

09/803,607

Applicant(s)

DAVIDKHANIAN ET AL.

Examiner

Scott Kastler

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### ***Election/Restrictions***

Applicant's election of Group I (claims 1-8) in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 9-20 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 5.

### ***Claim Objections***

Claims 4-8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The above claims do not fairly further limit independent method claim 1 for the following reasons:

1. With respect to claim 4, since claim 1 already states that the "sensitivity constant" is "based upon" the second property (step c of claim 1), and claim 4 gives no clear indication as to exactly how, or in what specific manner the sensitivity constant is to be based upon the derivative of the second property with respect to time (thereby allowing for any value), claim 4 does not further limit the allowed values of the sensitivity constant and therefore does not fairly further limit independent claim 1.

2. With respect to claims 5 and 6, the use of "neural network analysis" to calculate the sensitivity constant represents no more than the mathematical manipulation of values with no

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clear further limiting effect upon any of the physical method steps of independent claim 1.

Where claims merely recite mathematical operations, the claims are not properly further limiting.

See MPEP 2106 for example.

3. With respect to claims 7 and 8, since a “visual image” is inherently produced simply by the physical presence of the metallurgical containers recited in lines 1-3 of claim 1, and claims 7 and 8 do not limit how or in what form the visual image is produced (a visual image on a monitor, or a visual image through the use of an optical camera for example) claims 7 and 8 do not further limit that which is already recited in independent claim 1. The “analysis” of the visual image recited in claim 8 is not a further limiting recitation for the same reasons given with respect to claims 5 and 6 above.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Heaslip et al.

Heaslip et al teaches a method of determining disturbances when discharging molten metal (see col. 1 lines 7-13 for example) including, as taught in the embodiment of figure 2 for example, detecting mechanical vibrations caused by the discharge of molten metal (see col. 4 lines 1-25 for example), measuring a second property which varies during pouring, and which may be the position of the flow control gate (see col. 5 lines 45-55 for example) where the two measured

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properties are analyzed together and related so as to give indications when disturbances are present and allowing for actions to cause the disturbances to cease (see col. 3 line 65 to col. 6 line 30 for example for description of the above process), where the flow control gate (22) is located between a metallurgical container (10) and receiving container (16) thereby showing all properly limiting aspects of the above claims (as stated above claims 4-8 are held to be not properly further limiting over instant claim 1).

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each of Ardell et al, JP'960, JP'124 and JP'847 are also cited as further examples of prior art methods of detecting disturbances in molten metal flow through the measurement of vibrations.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

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A handwritten signature in black ink, appearing to read 'SK', with a long horizontal line extending to the right.

Scott Kastler  
Primary Examiner  
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sk  
April 22, 2003